

Savant Abilities in Autism Spectrum Disorder: A Systematic Literature Review and Meta-Analysis

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SUPPLEMENTARY MATERIALS

Figure S1

PRISMA Flowchart for study selection

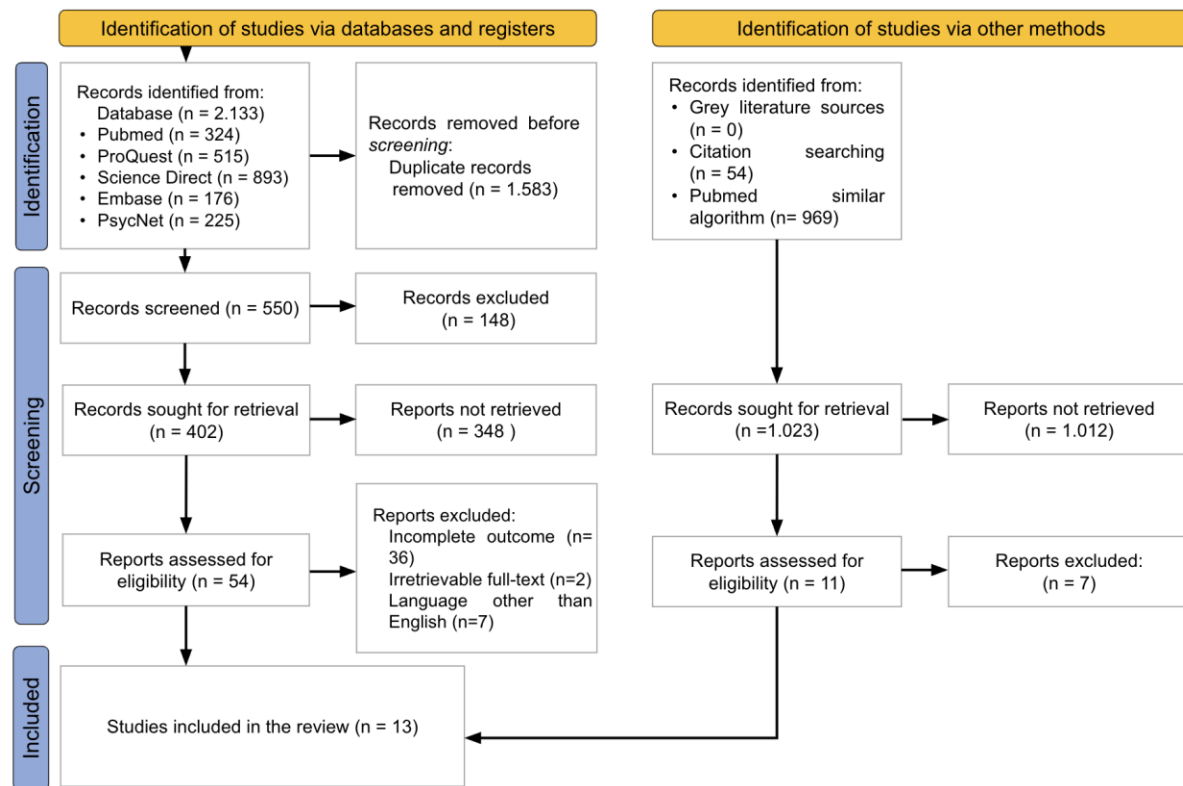


Table S2

Search Strategy

Pubmed	(((((((Autistic Spectrum Disorder[Title/Abstract] OR (ASD[Title/Abstract])) OR (Autism[Title/Abstract])) OR (Autism Spectrum Condition[Title/Abstract])) OR (ASC[Title/Abstract])) OR (Kanner Syndrome[Title/Abstract])) OR (Kanners	100.271
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	<p>Syndrome[Title/Abstract]) OR (Autistic[Title/Abstract]) OR (Autistic Disorder[Title/Abstract])</p> <p>(((((Savant[Title/Abstract]) OR (Special Skill[Title/Abstract])) OR (Extraordinary[Title/Abstract])) OR (Genius[Title/Abstract])) OR (Talent[Title/Abstract])) OR (Special Ability[Title/Abstract])) OR (Special Abilities[Title/Abstract])</p> <p>((((((((Autistic Spectrum Disorder[Title/Abstract]) OR (ASD[Title/Abstract])) OR (Autism[Title/Abstract])) OR (Autism Spectrum Condition[Title/Abstract])) OR (ASC[Title/Abstract])) OR (Kanner Syndrome[Title/Abstract])) OR (Kanners Syndrome[Title/Abstract])) OR (Autistic[Title/Abstract])) OR (Autistic Disorder[Title/Abstract])) AND ((((((Savant[Title/Abstract]) OR (Special Skill[Title/Abstract])) OR (Extraordinary[Title/Abstract])) OR (Genius[Title/Abstract])) OR (Talent[Title/Abstract])) OR (Special Ability[Title/Abstract])) OR (Special Abilities[Title/Abstract]))</p>	<p>30,740</p> <p>324</p>
ProQuest	<p>abstract(Savant) OR abstract('Special skill') OR abstract(Extraordinary) OR abstract(Genius) OR abstract(Talent) OR abstract('Special ability') AND abstract('Special abilities')</p> <p>abstract(autism) OR abstract('autistic spectrum disorder') OR abstract('autistic spectrum condition') OR abstract('kanner syndrome') OR abstract(autistic) OR abstract('autistic disorder')</p> <p>[S1] AND [S2]</p>	<p>112,842</p> <p>29,363</p> <p>515</p>
Embase	<p>#14 #12 AND #13</p> <p>#13 #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11</p> <p>#12 #1 OR #2 OR #3 OR #4</p> <p>#11 'special abilities':ab,ti</p> <p>#10 'special ability':ab,ti</p> <p>#9 'genius':ab,ti</p> <p>#8 'extraordinary':ab,ti</p> <p>#7 'special skill':ab,ti</p> <p>#6 'savant syndrome':ab,ti</p> <p>#5 'savant':ab,ti</p> <p>#4 'kanner syndrome':ab,ti</p> <p>#3 'autistic spectrum condition':ab,ti</p> <p>#2 'autistic spectrum disorder':ab,ti</p> <p>#1 'autism':ab,ti</p>	<p>176</p> <p>28,118</p> <p>88,913</p> <p>96</p> <p>185</p> <p>1,540</p> <p>25,936</p> <p>133</p> <p>64</p> <p>302</p> <p>12</p> <p>24</p> <p>1,594</p> <p>88,060</p>
PsycNet	<p>(Any Field: "Autistic Spectrum Disorder" OR Any Field: "Autism" OR Any Field: "Autism Spectrum Condition" OR Any Field: "Kanner Syndrome" OR Any Field: "Autistic" OR Any Field: "Autistic Disorder") AND (Any Field: "Savant" OR Any Field: "Special Skill" OR Any Field: "Special ability")</p>	<p>225</p>
Science Direct	<p>("Autistic Spectrum Disorder" OR "Autism" OR "Autism Spectrum Condition" OR "Kanner Syndrome" OR "Autistic" OR "Autistic Disorder") AND ("Savant" OR "Special Skill" OR "Special ability")</p>	<p>893</p>

Pubmed Similar Algorithm	PMID: 31287074	91
	PMID: 32042040	124
	PMID: 19528018	101
	PMID: 34088226	94
	PMID: 22527706	78
	PMID: 20942360	146
	PMID: 25374134	100
	PMID: 19490312	88
	PMID: 37157995	147

Table S3

Risk of Bias Analysis

Author	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Score
Kim et al (2011)	Y	Y	Y	Y	N	N	Y	Y	6
Hughes et al (2017)	Y	Y	Y	Y	N	N	Y	Y	6
Daniel and Menashe (2020)	Y	Y	Y	Y	N	N	Y	Y	6
Howlin et al (2009)	Y	Y	Y	Y	N	N	Y	Y	6
Bal et al (2022)	Y	Y	Y	Y	U	N	Y	Y	6
Bennett and Heaton (2012)	U	Y	Y	Y	N	N	Y	N	7
Bennett and Heaton (2017)	Y	Y	Y	Y	N	N	Y	Y	6
Pring et al (2010)	Y	Y	Y	Y	N	N	Y	Y	6
Meilleur (2015)	Y	Y	Y	Y	N	N	Y	N	6
Bolte and Poutstka (2003)	Y	Y	Y	Y	N	N	Y	Y	6
Vital et al (2009)	Y	Y	Y	Y	N	N	Y	Y	6
Clark et al (2023)	Y	Y	Y	Y	N/A	N/A	Y	Y	6
Itzchak (2013)	U	Y	Y	Y	N	N	Y	U	5

Figure S4

Forest plot of Age

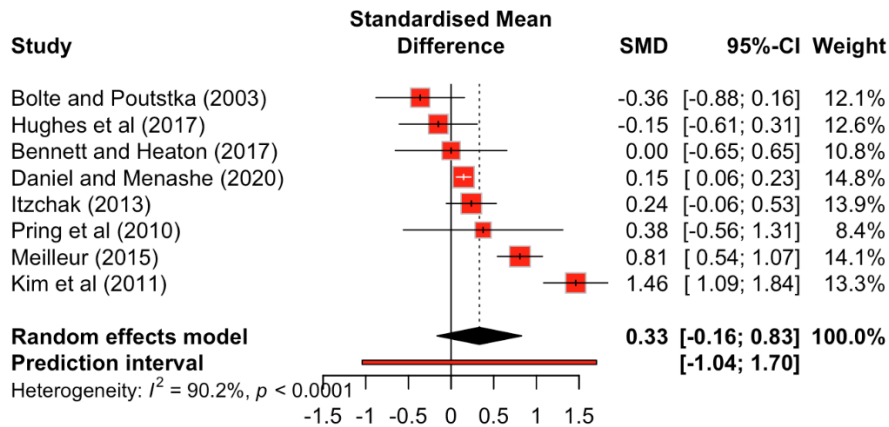


Figure S5

Forest plot of Sex Differences

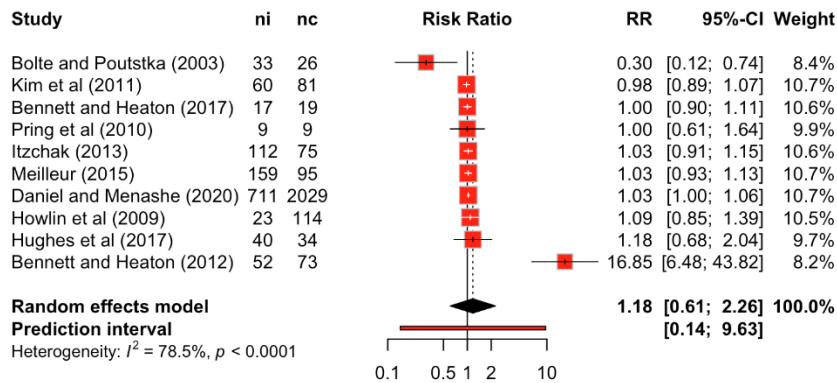


Figure S6

Regression test for funnel plot asymmetry (Egger's test) for Cognitive Domain

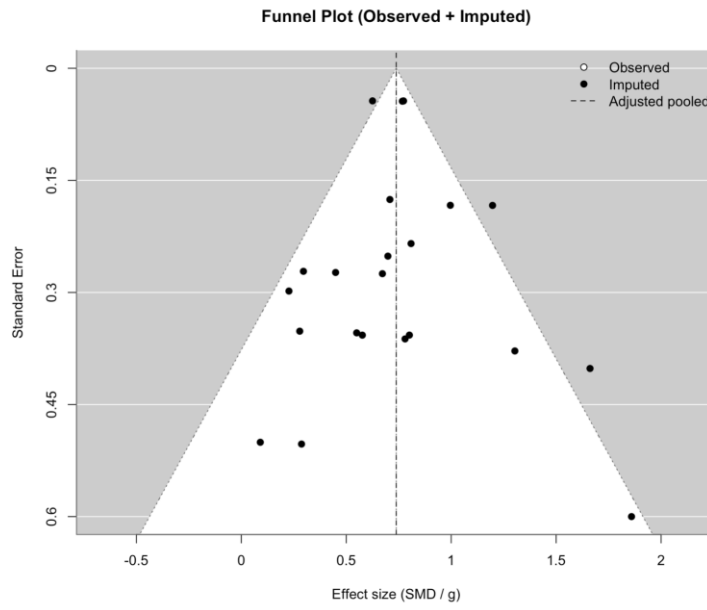


Figure S7

Regression test for funnel plot asymmetry (Egger's test) for non-Social Domain

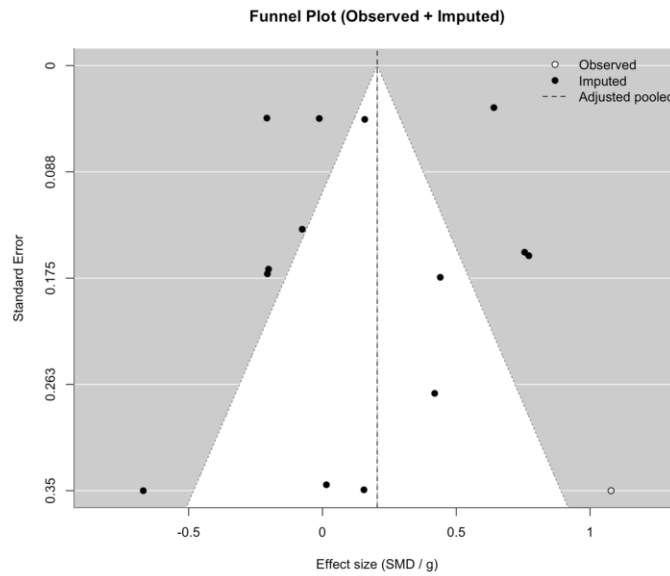


Figure S8

Regression test for funnel plot asymmetry (Egger's test) for Social Domain

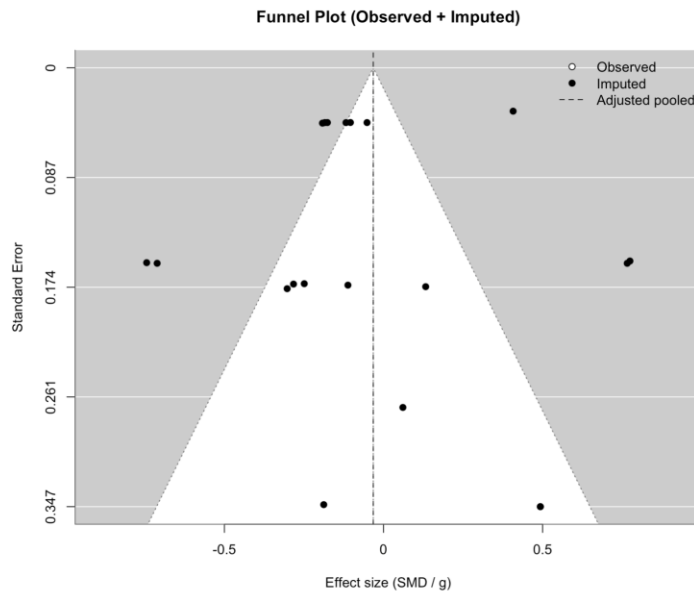


Figure S9

Regression test for funnel plot asymmetry (Egger's test) for Sex Domain

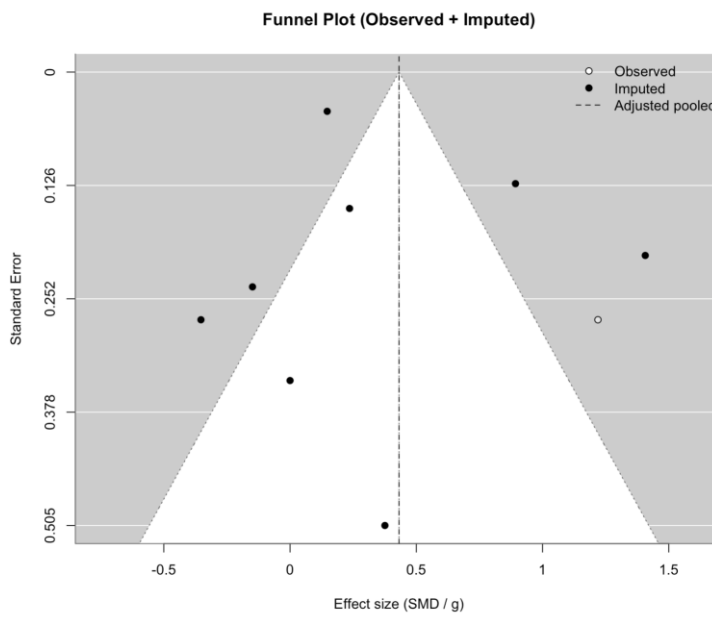


Figure S10

Regression test for funnel plot asymmetry (Egger's test) for Sex Domain

